CALIFORNIA HYDROGEN HIGHWAY NETWORK
HYDROGEN INFRASTRUCTURE

California is Committed to Hydrogen Vehicles and Infrastructure

California continues to lead the nation by requiring the development and commercialization of zero emission vehicles that consumers will want to drive. Dependable fueling infrastructure is vital to commercial success of any alternative fueled vehicle. For hydrogen, this means fueling stations that offer the same convenience that drivers have come to expect with gasoline.

Policy drivers spell commitment

A number of important legislative and regulatory drivers are behind the advancement of hydrogen and zero emission vehicles as well as other clean fuels.

- The zero emission vehicle (ZEV) mandate requires each large auto maker to produce ZEVs by 2014. The number of ZEVs marketed will depend on vehicle technology and functionality. ZEVs include hydrogen fuel cell vehicles that fast refuel and have ranges of 200 miles or greater, and battery electric vehicles with capabilities ranging from fast charge and 200+ miles range to neighborhood vehicles limited to 25mph. For details on the ZEV mandate, go to: http://www.arb.ca.gov/msprog/zevprog/factsheets/2008zevfacts.pdf
- The Scoping Plan developed pursuant to AB 32, the Global Warming Solutions Act of 2006, recommends adopting and implementing measures such as California's clean car requirements and the Low Carbon Fuel Standard. This standard calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Hydrogen is an important lower carbon compliance option in this standard.

Hydrogen infrastructure plans match vehicle placements

In January 2009, major auto companies shared their plans for deploying fuel cell passenger vehicles in northern and southern California.[1] According to their combined projections, the number of passenger fuel cell vehicles deployed in Southern California will more than double each year between 2009 and 2017, when they expect the total to be over 41,000. In Northern California, they project 8,450 passenger vehicles by 2017.

By 2017, an estimated 50 to 100 retail hydrogen stations - roughly 10 stations per year – will be needed to satisfy the demand created by the vehicle and bus deployments. These new public stations must meet customer expectations and next generation fuel cell vehicle requirements with regard to location, ease of access, reliability and dispensing capabilities. These stations will dispense hydrogen that is renewable and twice as clean as gasoline used in clean conventional vehicles.

State and local hydrogen funding

The AB 118 Alternative and Renewable Fuel and Vehicle Investment Plan includes funding for hydrogen infrastructure. California and local air districts will continue to support hydrogen vehicle advancement by funding hydrogen stations and encouraging clean renewable hydrogen production. For more information on California's Hydrogen Highway program, go to www.hydrogenhighway.ca.gov.

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[1] Hydrogen and Fuel Cell Vehicle and Station Deployment Plan: A Strategy for Meeting the Challenge Ahead. California Fuel Cell Partnership, February 2009.

To date, California has awarded co-funding for seven hydrogen fueling stations.

Hydrogen Stations Co-Funded by State of California and under construction			
Name/Location	State funding (millions)	Capacity (kg H2/day)	Percent Renewable H2
Air Products and Chemicals Hwy 405 in Fountain Valley	$2.7	100	100%
CalState University, Los Angeles, Hwy 10 at Hwy 710	$2.2	60	100%
Mebtahi Station Services PCH (Hwy 1) in Harbor City	$1.7	100	0%
Shell Newport Beach	$1.7	100	0%
UCLA, SW corner of campus Hwy 405 in Westwood	$1.7	140	0%
Alameda-Contra Costa Transit Hwy 80 in Emeryville	$2.7	60	100
San Francisco Airport Hwy 101 in San Bruno	$1.7	100	0%
Statewide totals	$14.4	660	33%†

†Statewide average percent renewable hydrogen from state co-funded stations

The greater Los Angeles Area is a focal point of hydrogen activity with vehicle placements initially in the four hydrogen communities shown below.

Stations co-funded by State of California and under construction.
Stations currently in operation with access by all automakers

For More Information

If you would like more about the California Hydrogen Highway Network, please visit www.HydrogenHighway.ca.gov or call (800) 242-4450.